

FROM: Darden Hood, Director (mailto:<mailto:dhoo@radiocarbon.com>)
(This is a copy of the letter being mailed. Invoices/receipts follow only by mail.)

May 20, 2005

Mr. Bill Feller
MACTEC
5341 Old Redwood Hwy Suite 300
Petaluma, CA 94954
USA

RE: Radiocarbon Dating Results For Samples RGPZ2D01, RP62D01, RP62B101

Dear Bill:

Enclosed are the radiocarbon dating results for three samples recently sent to us. They each provided plenty of carbon for accurate measurements and all the analyses went normally. The analyses was performed on the DIC within the submitted waters. Results are reported both as fraction of modern (Fmdn) and as the Apparent Radiocarbon Age. The report sheet also includes the method used, material type, and applied pretreatments.

The reported Apparent Radiocarbon Ages have not been corrected for any effects. They do not necessarily represent the residence time of the water within the aquifer. That would have to be derived by incorporating the radiocarbon dating result into models which take hydrologic conditions into account. The Apparent Radiocarbon Age is used as a relational tool, of understandable units to the layman, to interpret hydrologic differences between wells and to monitor temporal changes. For example, if semi-annual measurements on the same well provided consecutively decreasing apparent ages, it may indicate over-pumping or eminent surface water uptake.

We analyzed these samples on a sole priority basis. No students or intern researchers who would necessarily be distracted with other obligations and priorities were used in the analysis. We analyzed them with the combined attention of our entire professional staff.

Information pages are also enclosed with the mailed copy of this report. If you have any specific questions about the analysis, please do not hesitate to contact us. Someone is always available to answer your questions.

Our invoice has been sent separately. Our copy is enclosed. Thank you for your prior efforts in arranging payment. As always, if you have any questions or would like to discuss the results, don't hesitate to contact me.

Sincerely,

A handwritten signature in black ink, reading "Darden Hood". The signature is written in a cursive, flowing style with a large initial "D".

Mr. Bill Feller

Report Date: 5/20/2005

MACTEC

Material Received: 4/15/2005

Sample Data	Apparent C14 Age (fraction modern)	C13/C12 Ratio
Beta - 204140 SAMPLE : RGPZ2D01 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (water DIC): carbonate precipitation	32400 +/- 390 BP (Fmdn 0.0177 +/- 0.0009)	-0.1 o/oo
Beta - 204141 SAMPLE : RP62D01 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (water DIC): carbonate precipitation	28510 +/- 240 BP (Fmdn 0.0287 +/- 0.0009)	+0.2 o/oo
Beta - 204142 SAMPLE : RP62B101 ANALYSIS : AMS-Standard delivery MATERIAL/PRETREATMENT : (water DIC): carbonate precipitation	23650 +/- 130 BP (Fmdn 0.0526 +/- 0.0009)	+2.8 o/oo